

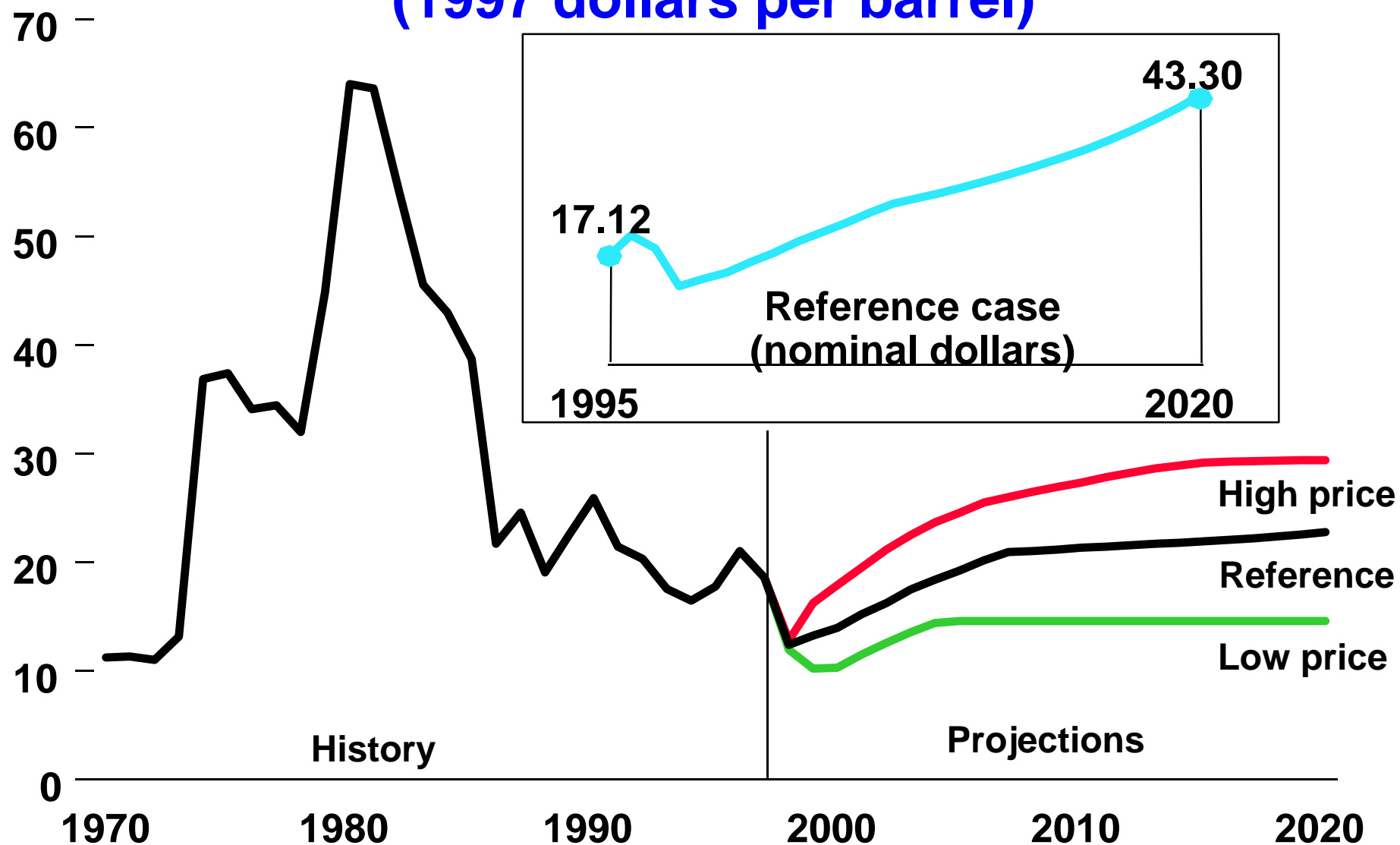
**Presented to Mining Technology Symposium
Morgantown, WV**

June 23, 1999

The Outlook for U.S. Coal Markets Through 2020

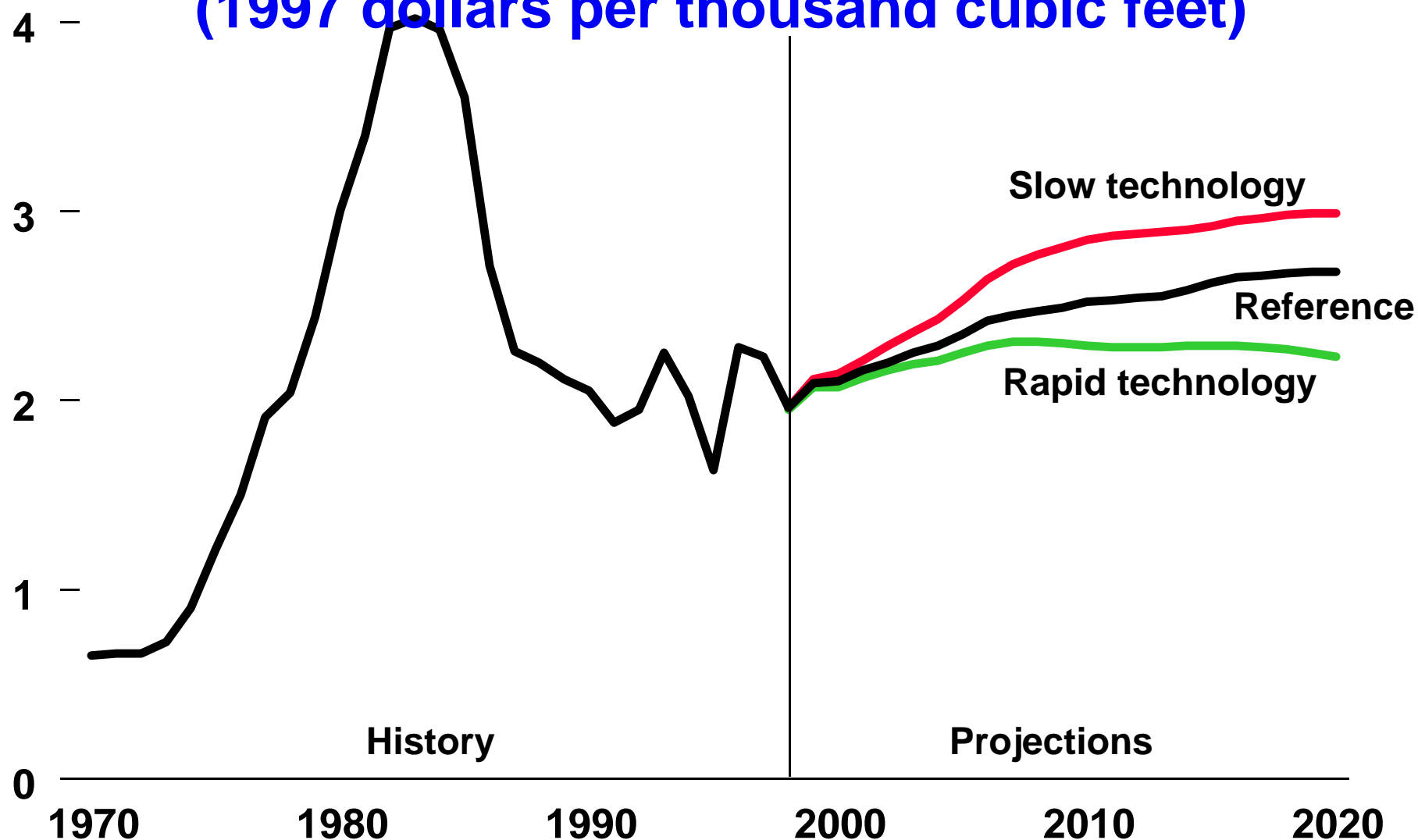
**Mary J. Hutzler
U.S. Energy Information Administration
Washington, D.C.**

World Oil Prices in Three Cases, 1970-2020 (1997 dollars per barrel)

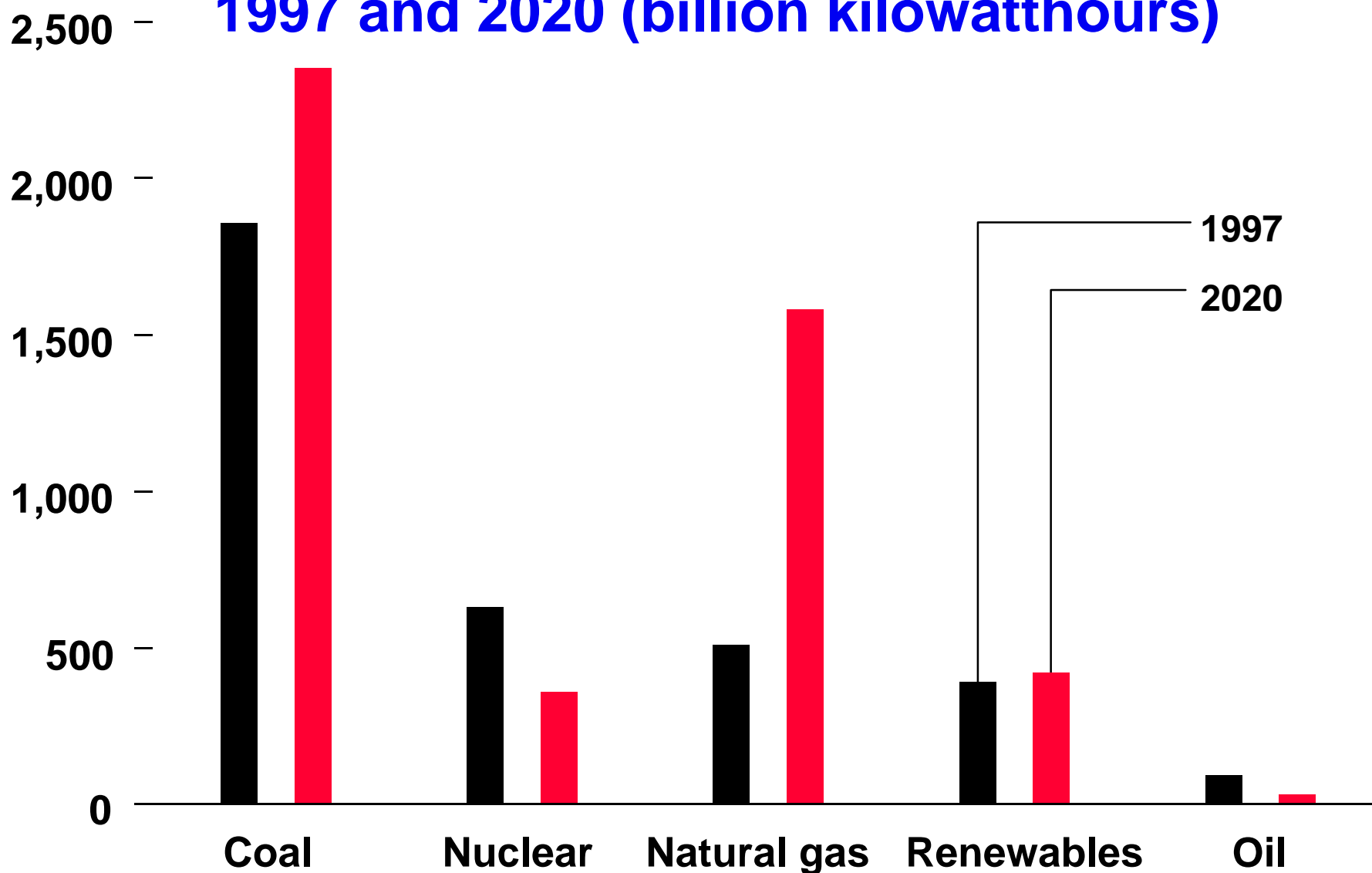


Lower 48 Natural Gas Wellhead Prices in Three Cases, 1970-2020

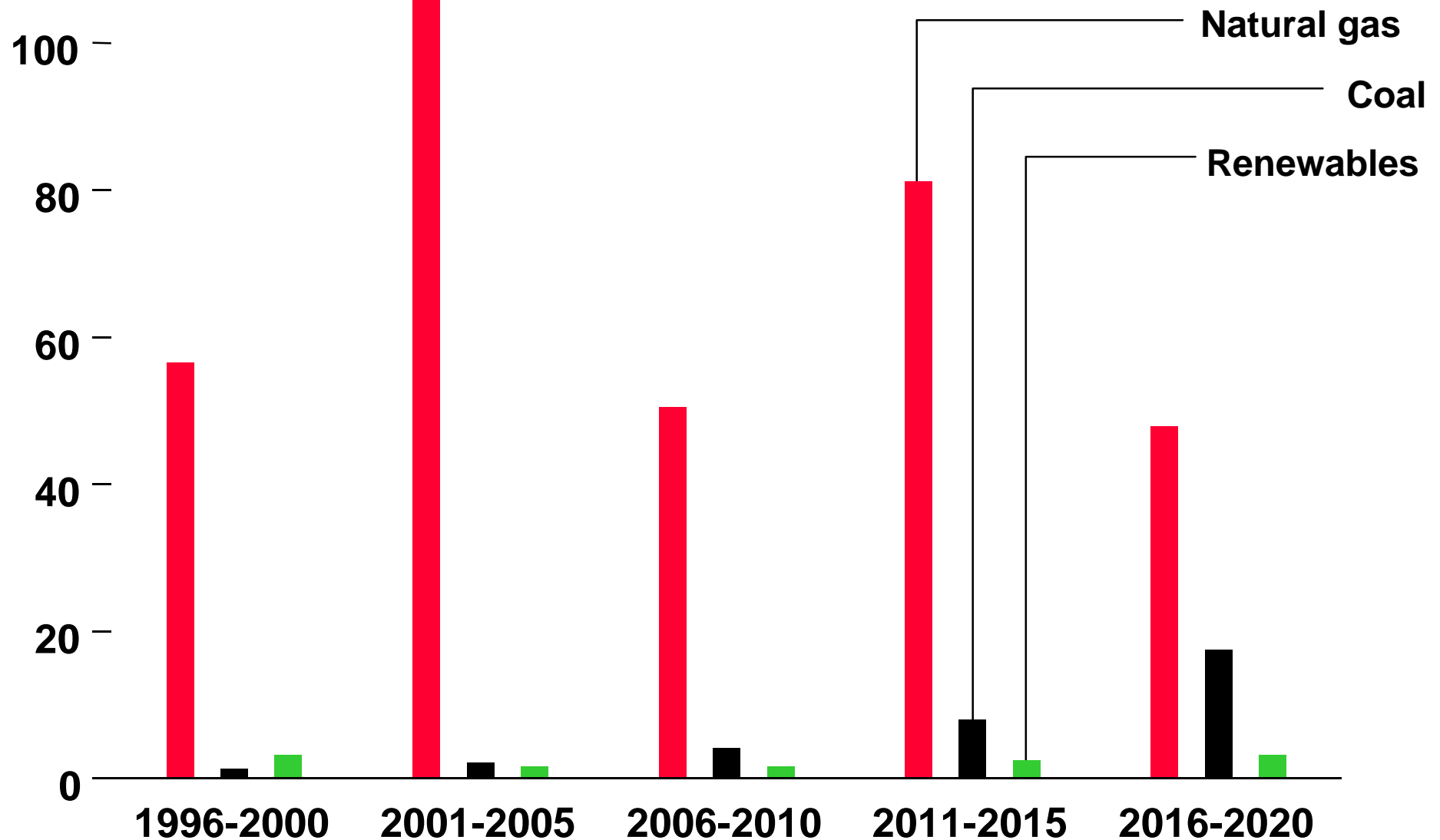
(1997 dollars per thousand cubic feet)



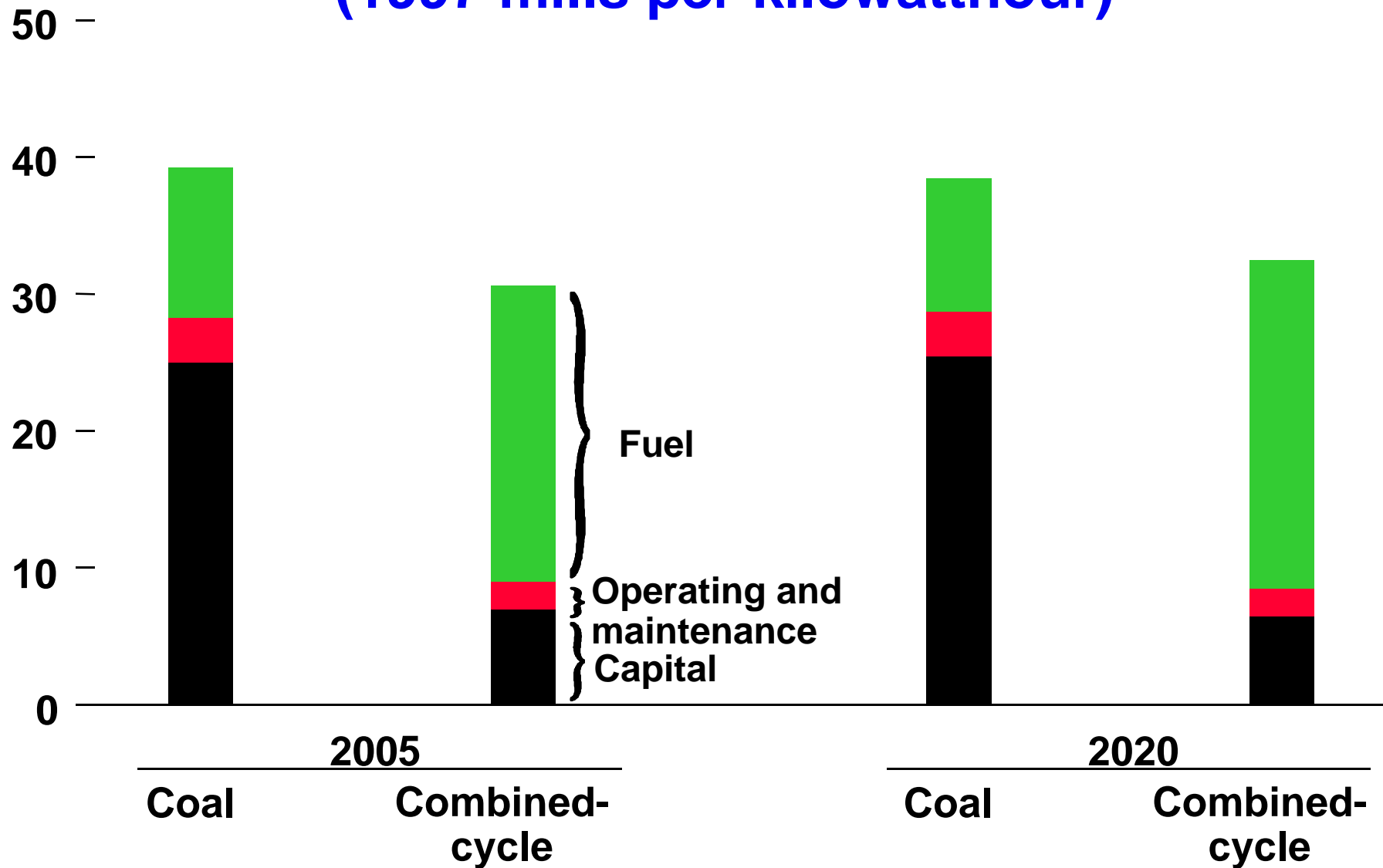
Electricity Generation by Fuel, 1997 and 2020 (billion kilowatthours)



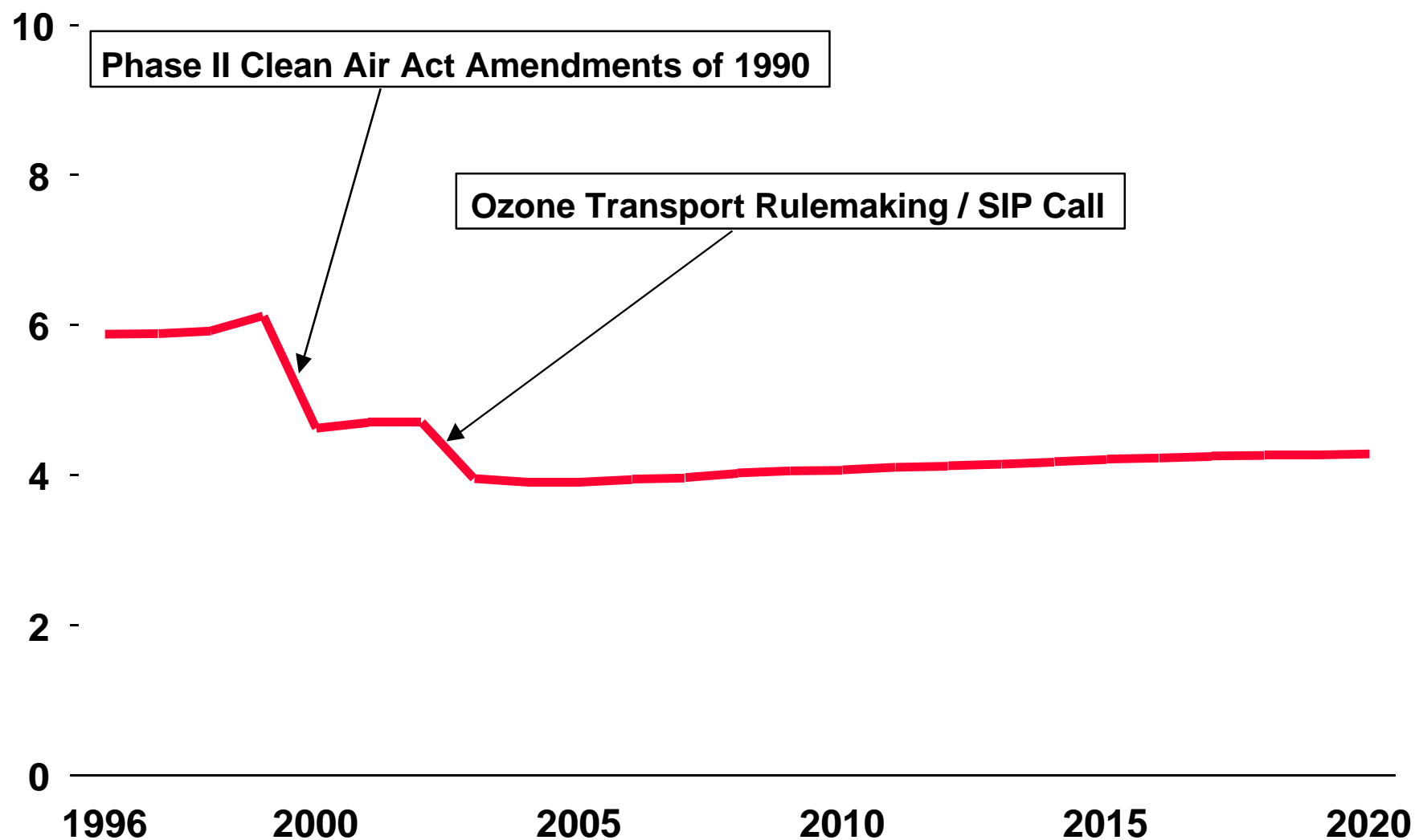
Electricity Generation and Cogeneration Capacity Additions by Fuel Type, 1996-2020 (gigawatts)



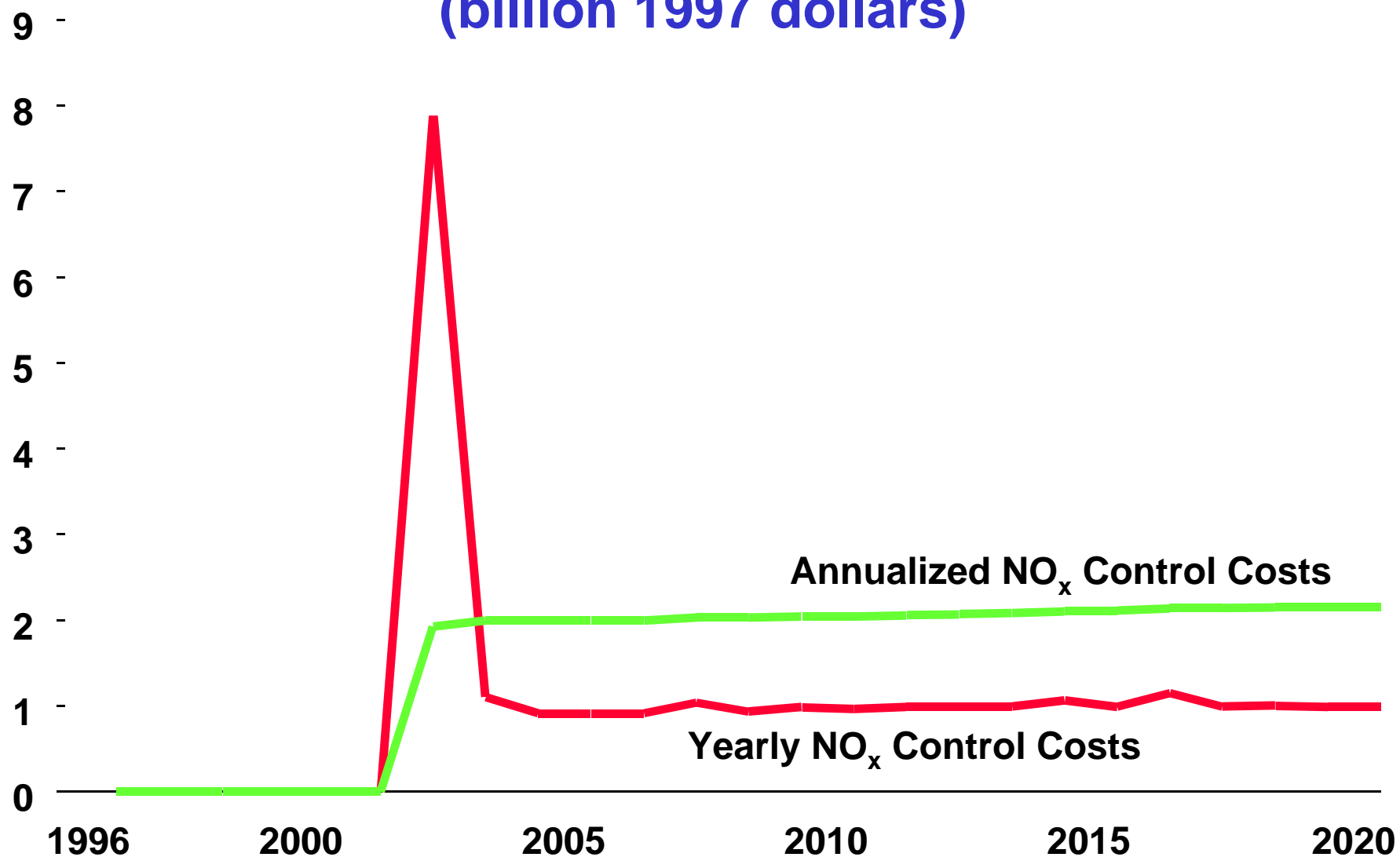
Electricity Generation Costs, 2005 and 2020 (1997 mills per kilowatthour)



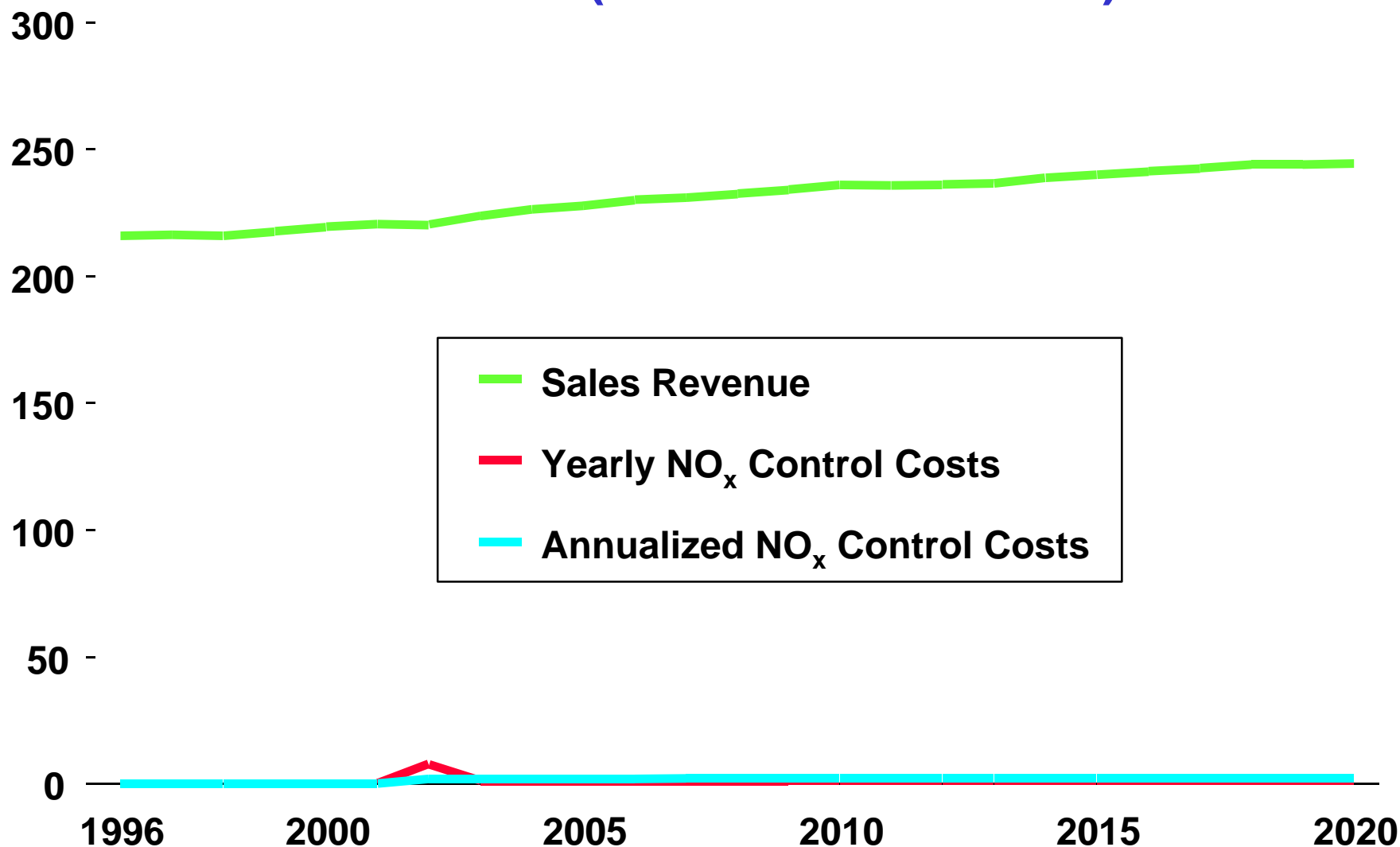
New Legislation Reduces NO_x Emissions from Powerplants, 1996-2020 (million tons)



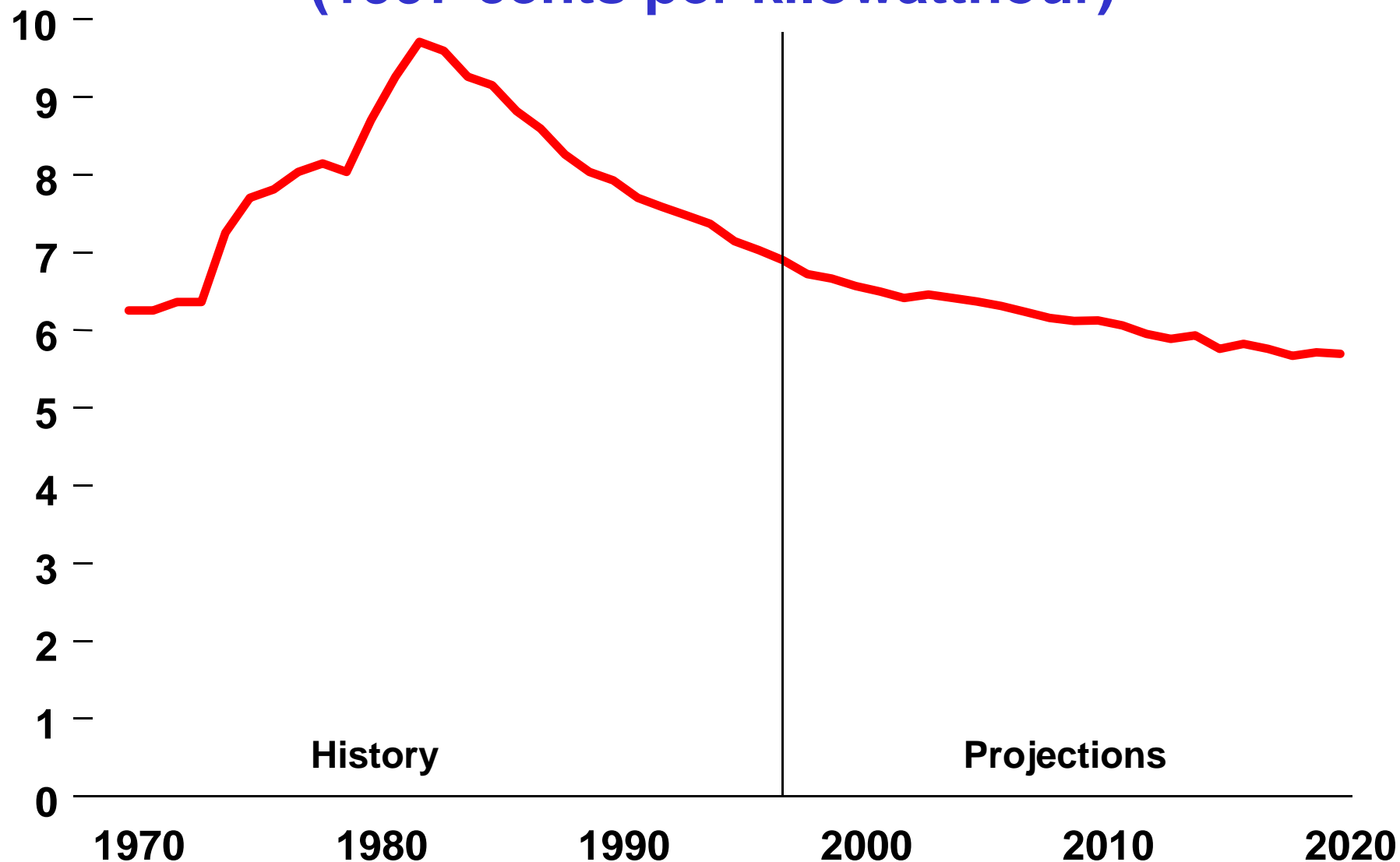
SIP Call NO_x Control Costs, 1996-2020 (billion 1997 dollars)



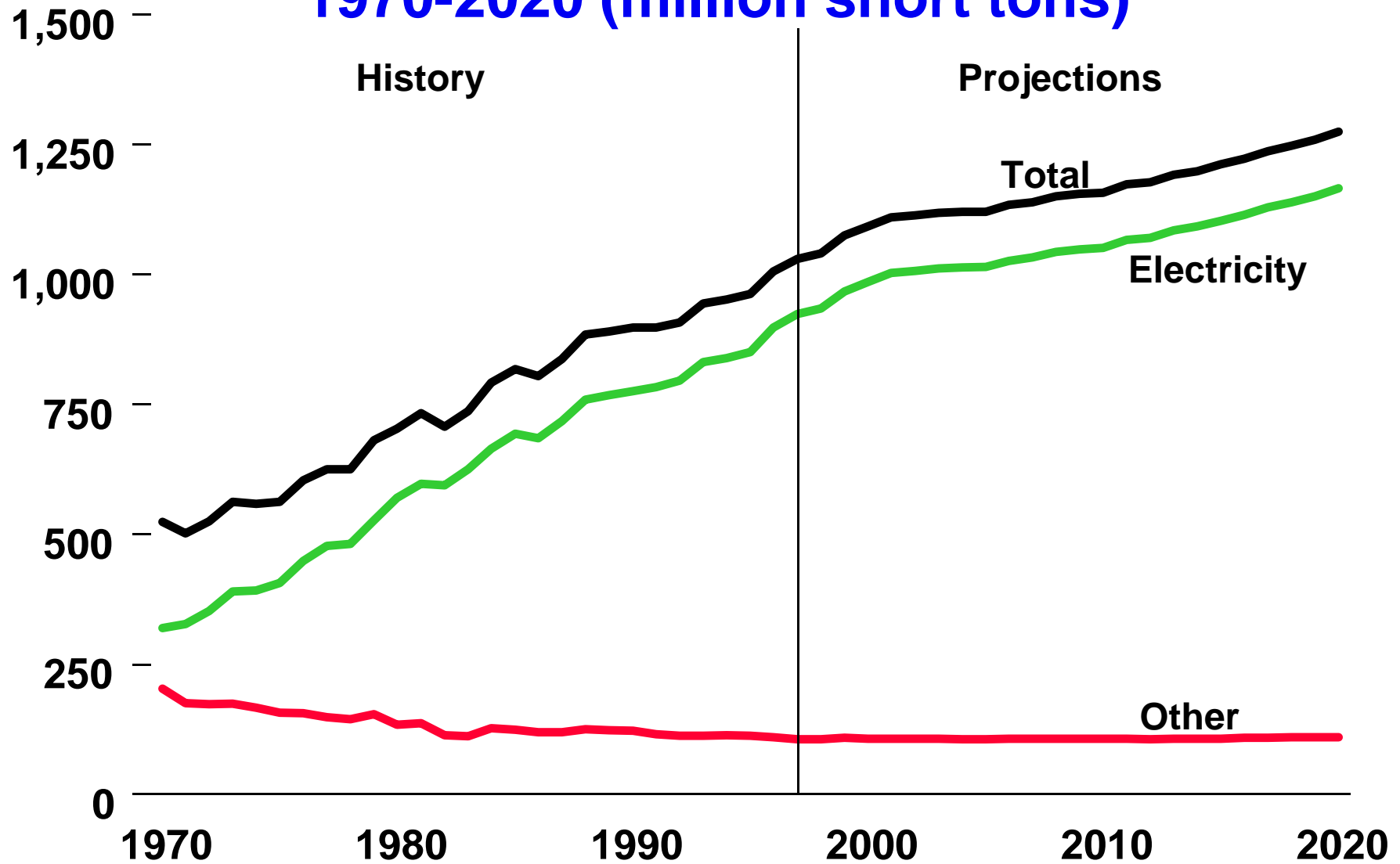
SIP Call NO_x Control Costs Relative to Sales Revenue, 1996-2020 (billion 1997 dollars)



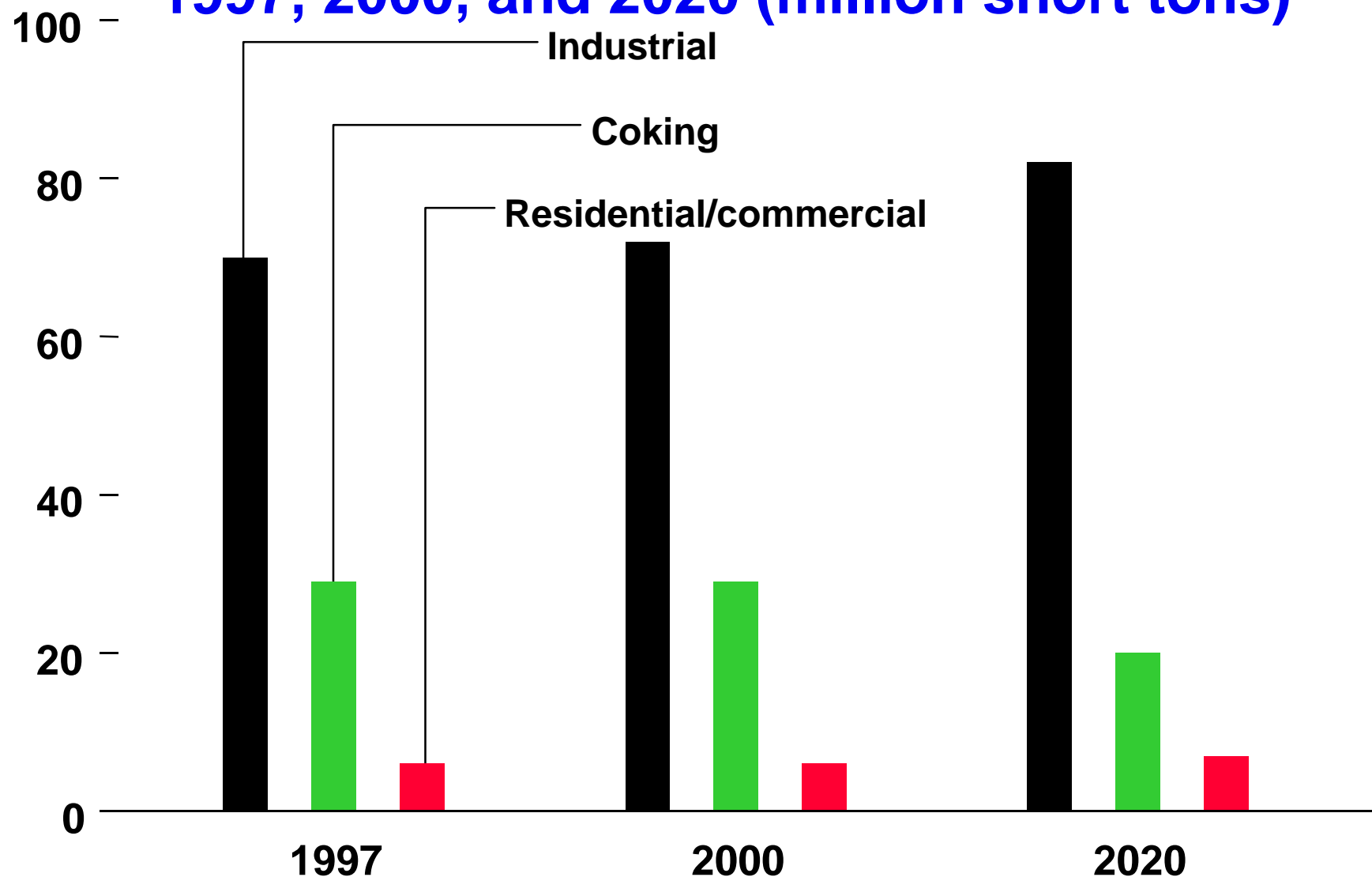
Electricity Price Projections, 1970-2020 (1997 cents per kilowatthour)



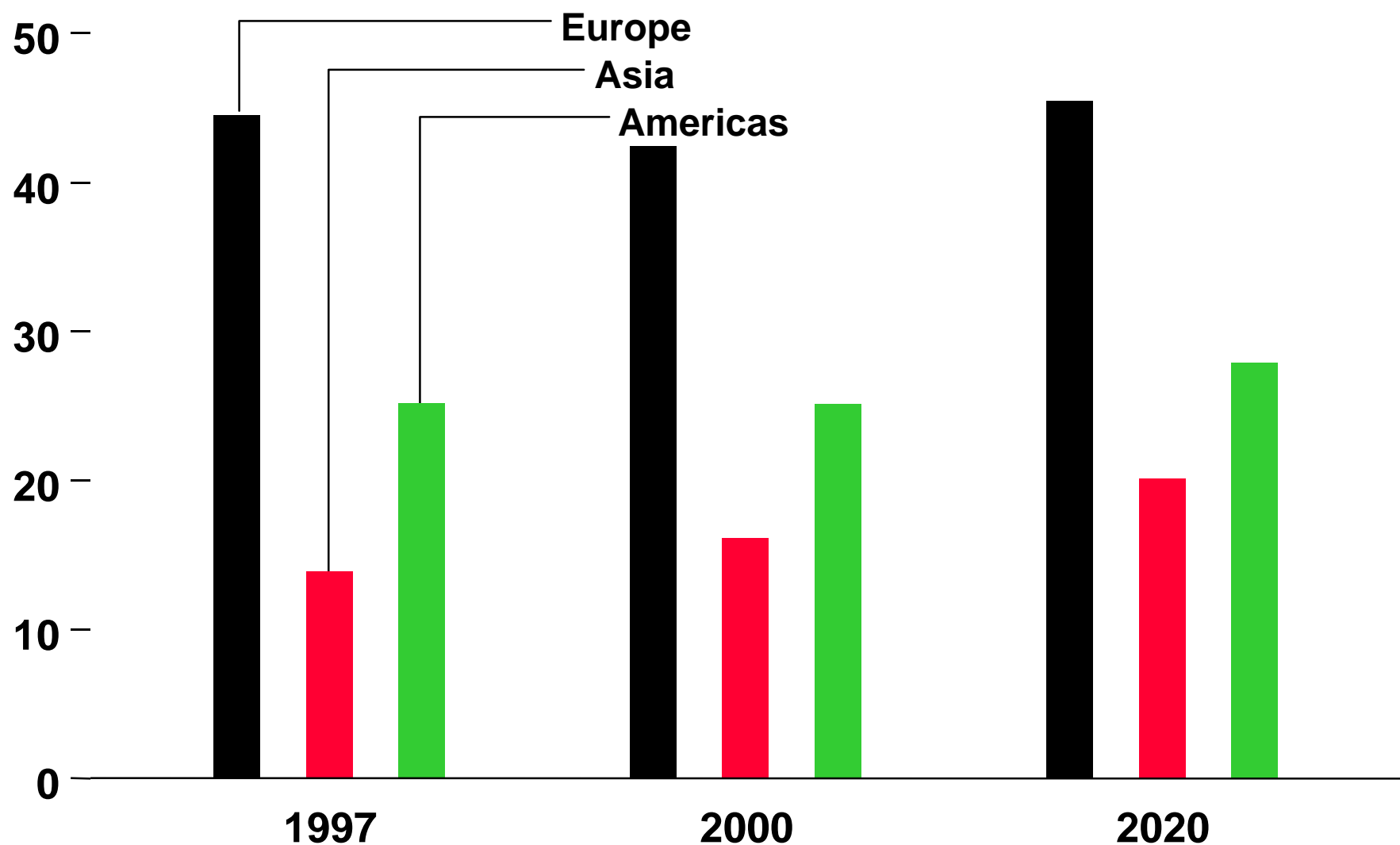
Electricity and Other Coal Consumption, 1970-2020 (million short tons)



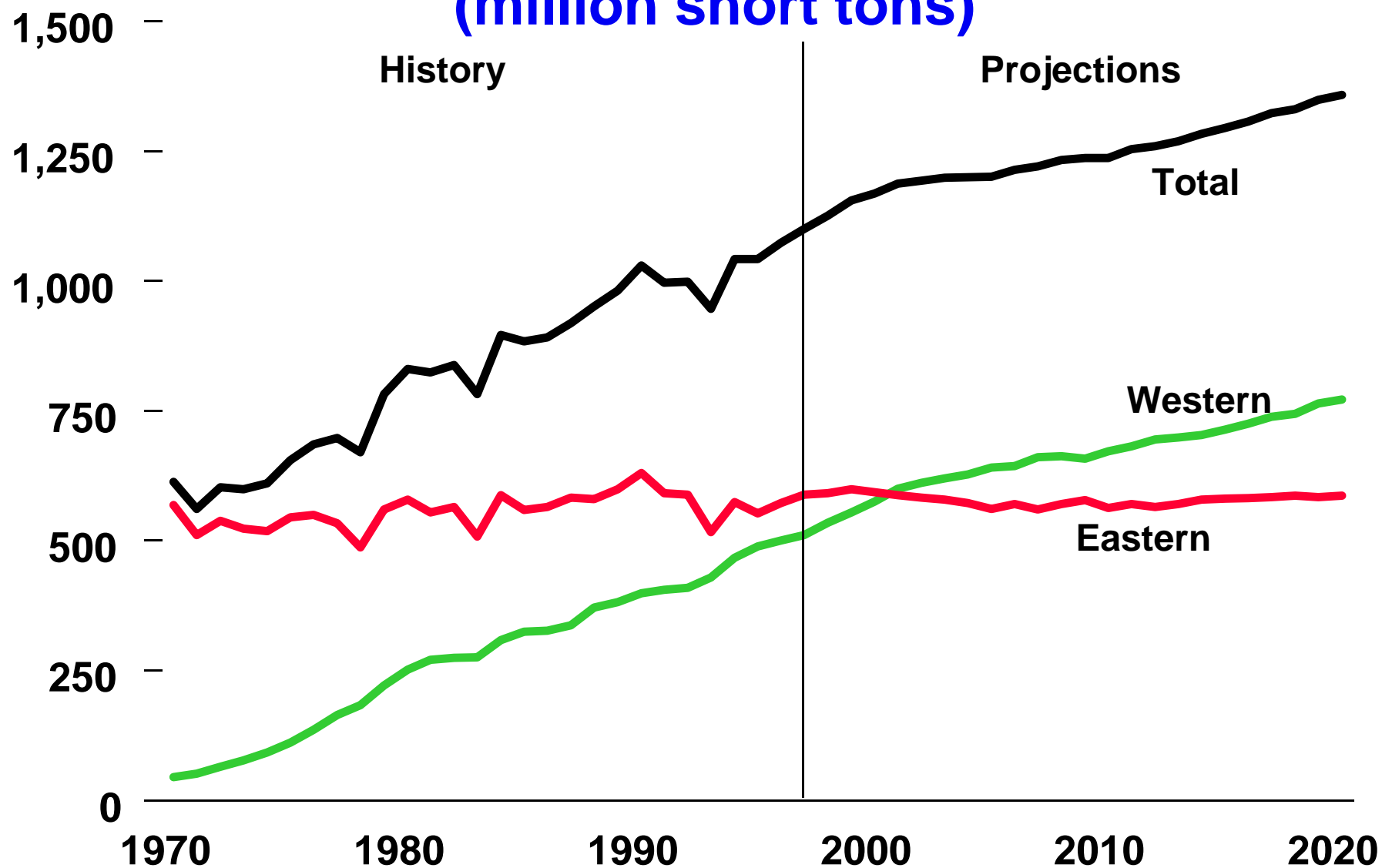
Non-Electricity Coal Consumption by Sector, 1997, 2000, and 2020 (million short tons)



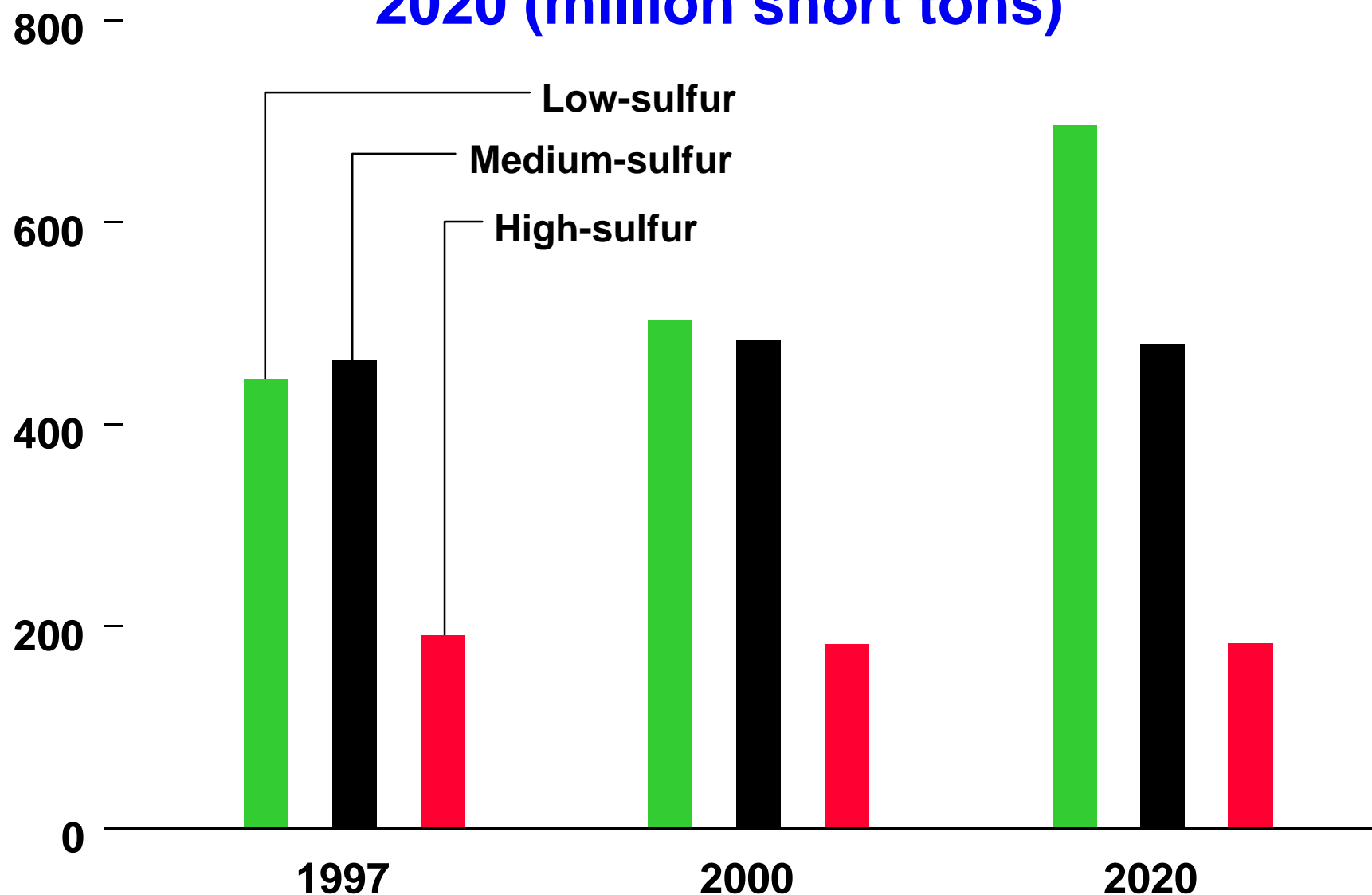
U.S. Coal Exports by Destination, 1997, 2000, and 2020 (million short tons)



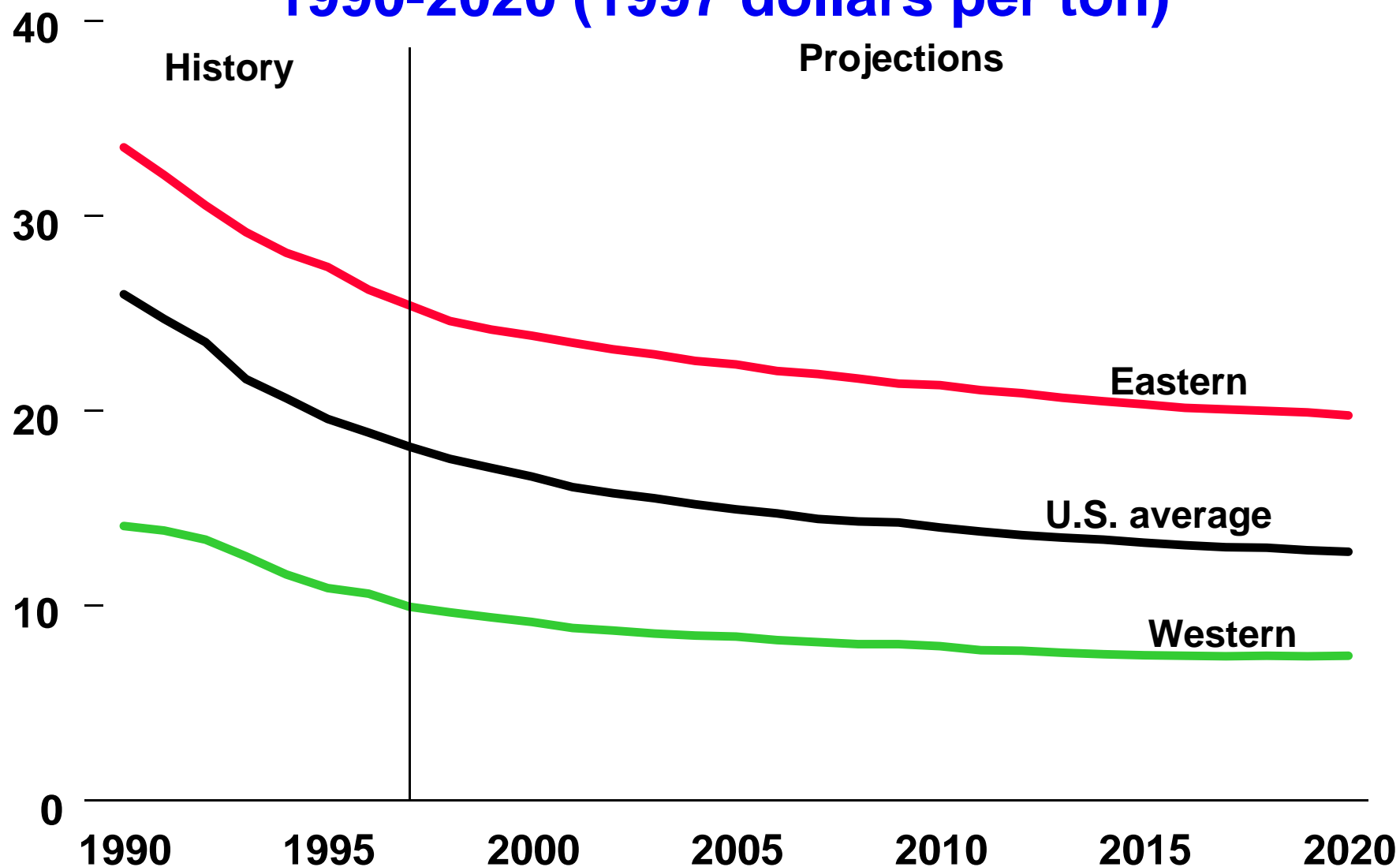
Coal Production by Region, 1970-2020 (million short tons)



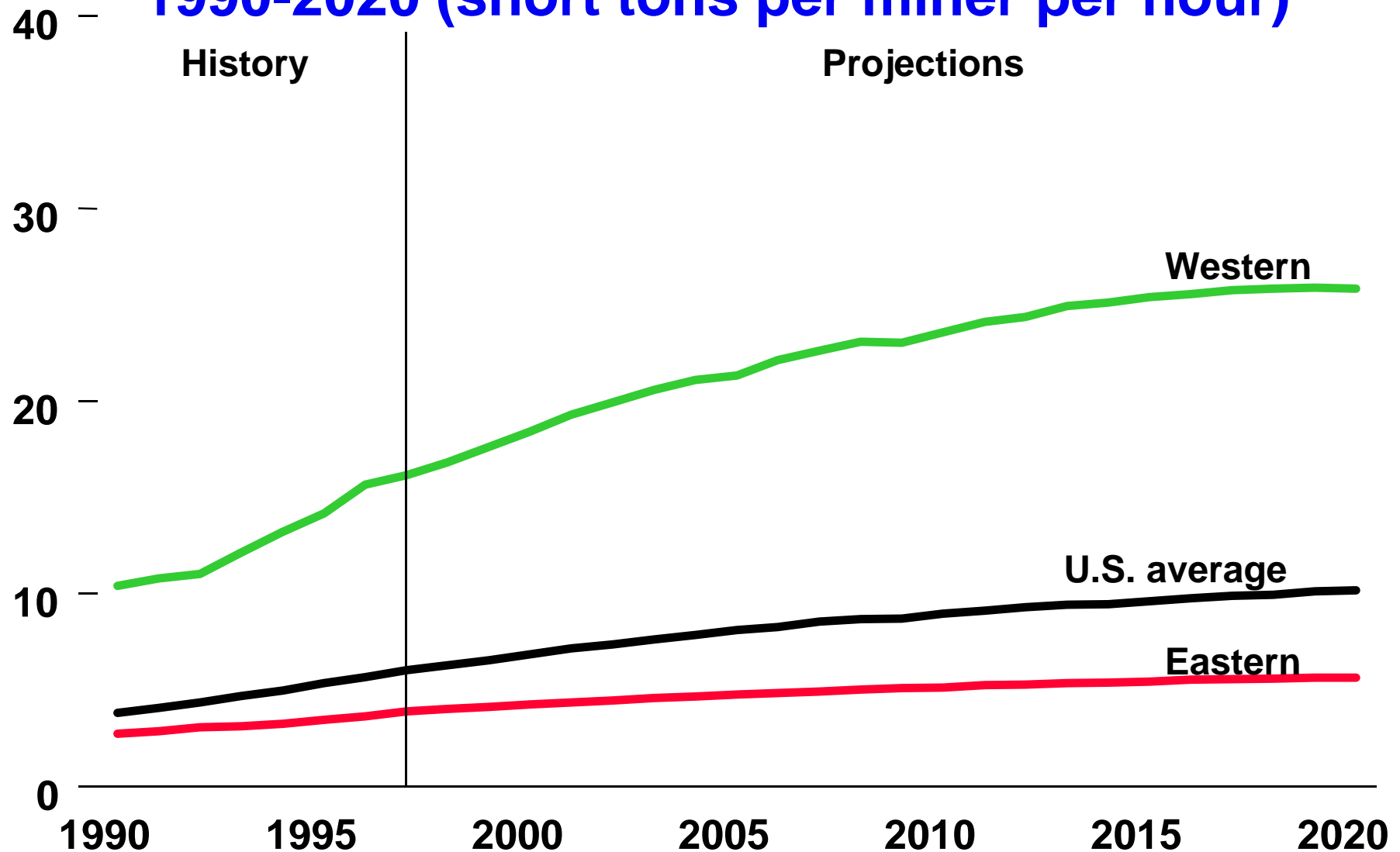
Coal Distribution by Sulfur Content, 1997, 2000, and 2020 (million short tons)



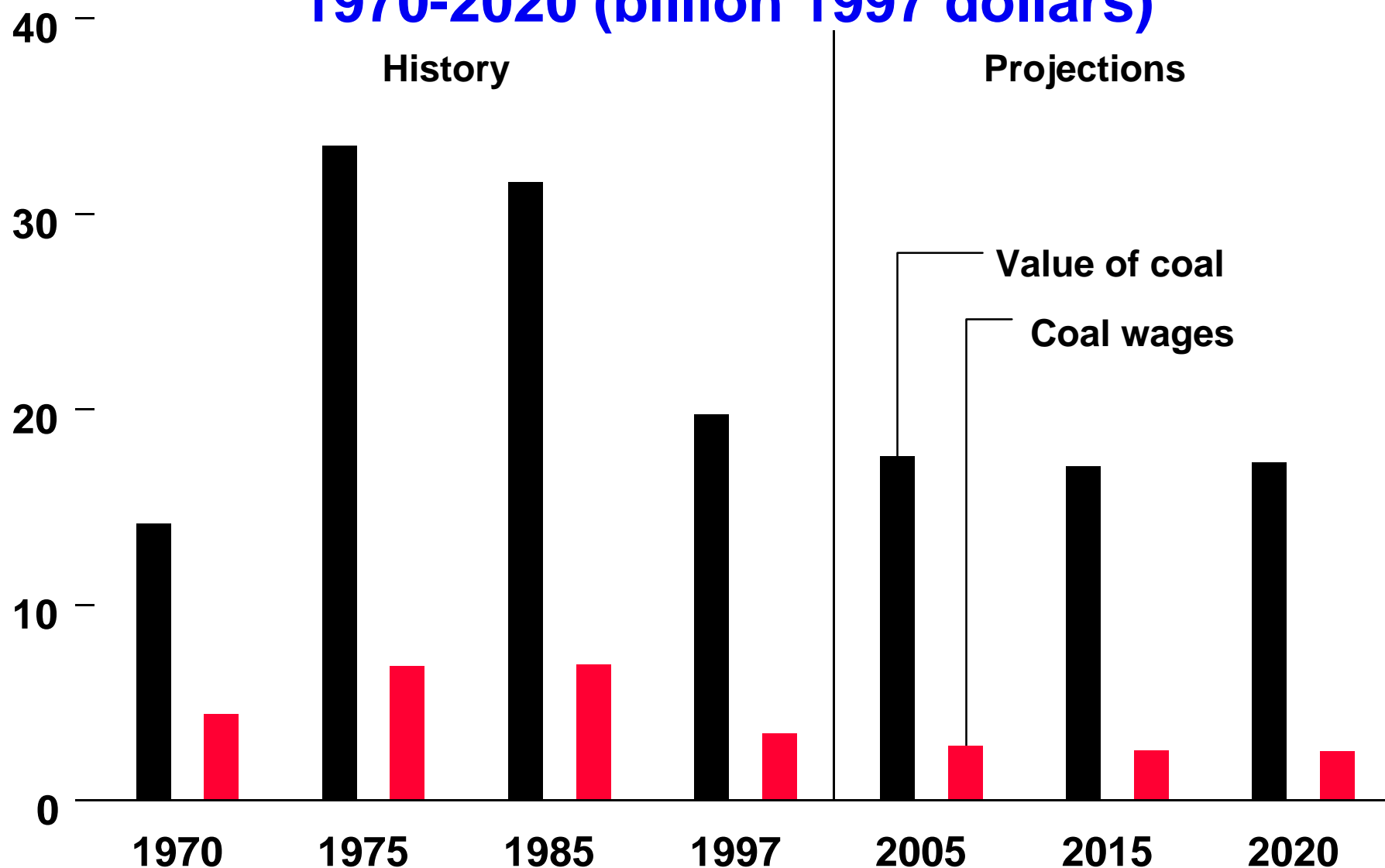
Average Minemouth Price of Coal by Region, 1990-2020 (1997 dollars per ton)



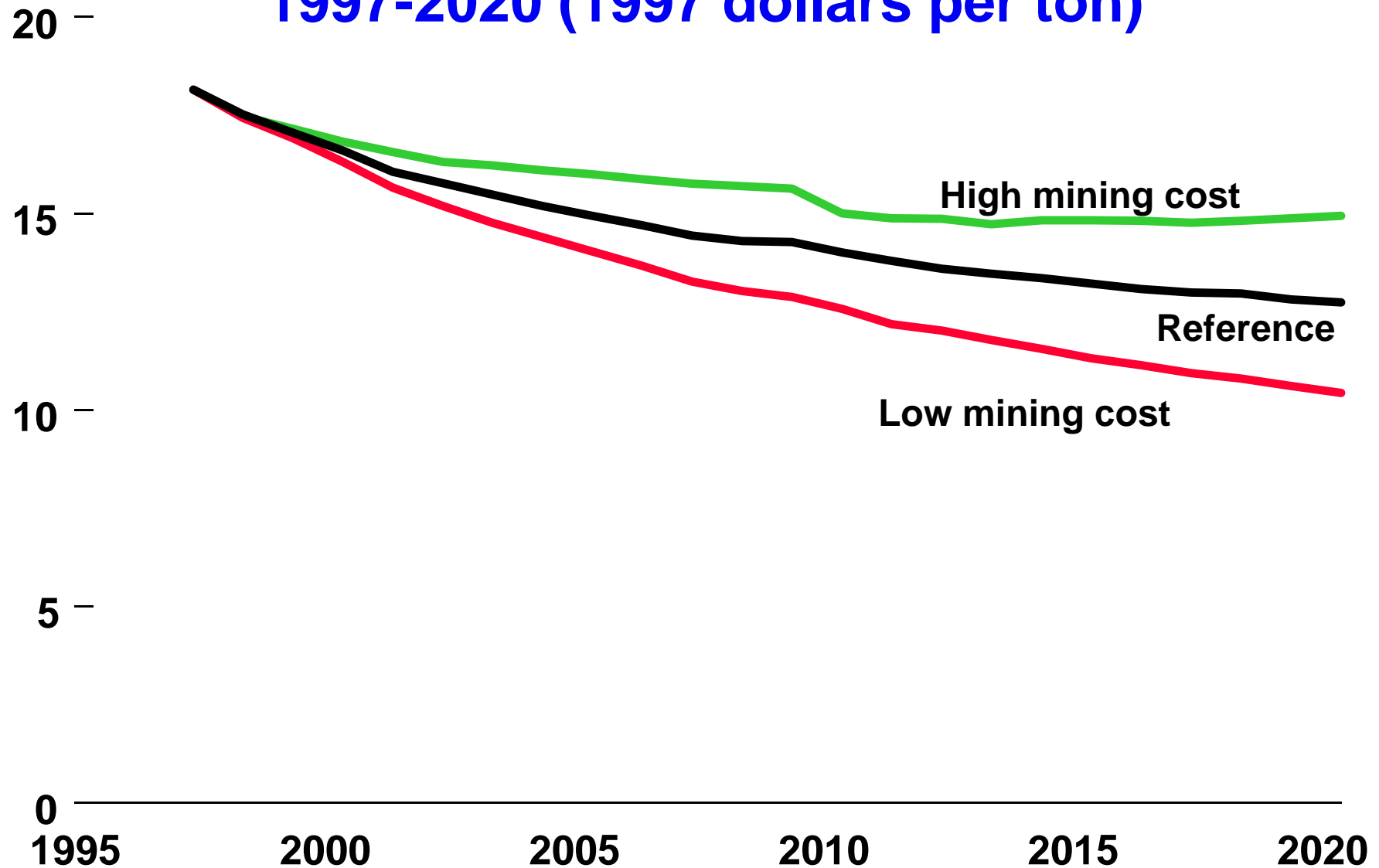
Coal Mining Labor Productivity by Region, 1990-2020 (short tons per miner per hour)



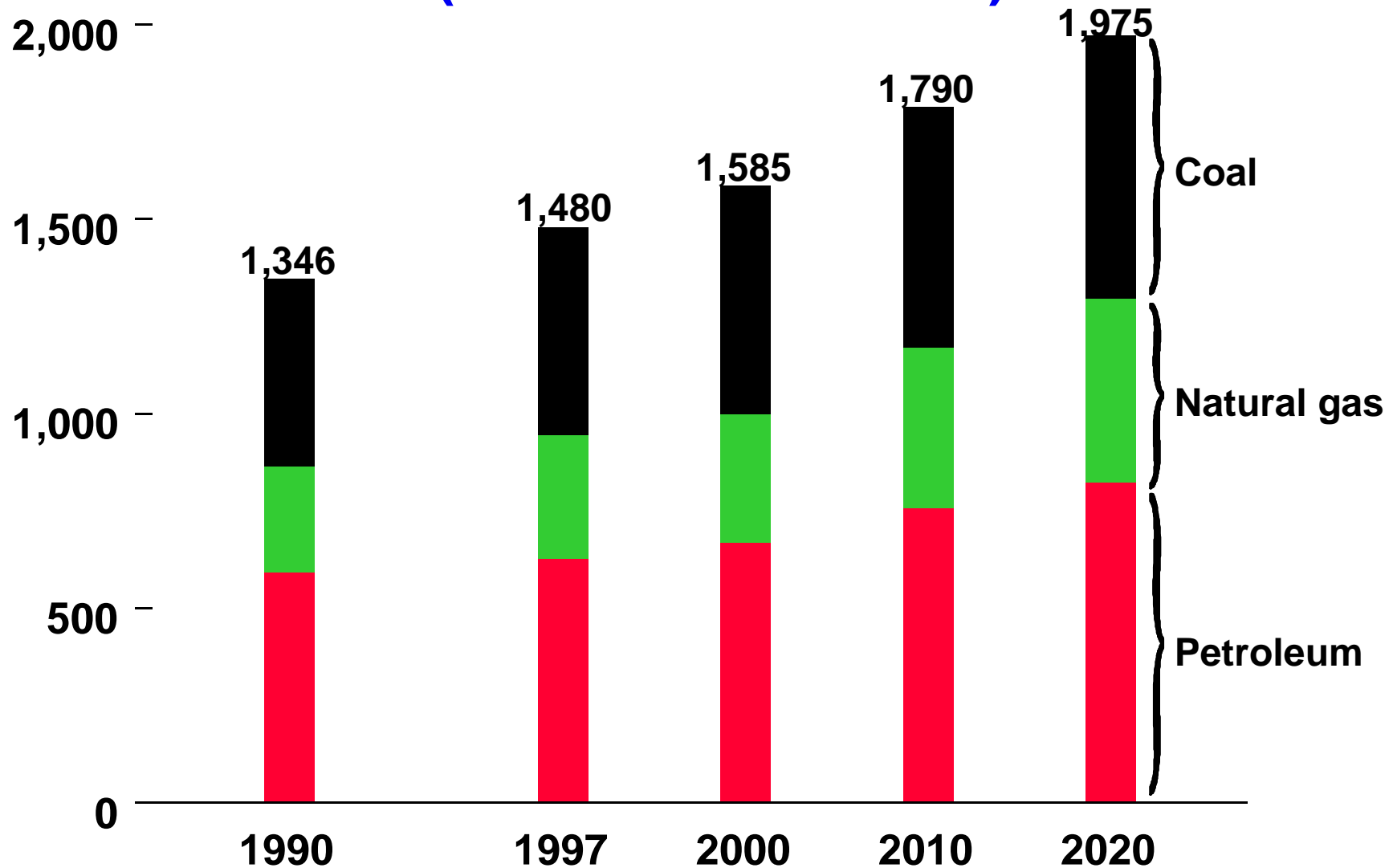
Labor Cost Component of Minemouth Coal Prices, 1970-2020 (billion 1997 dollars)



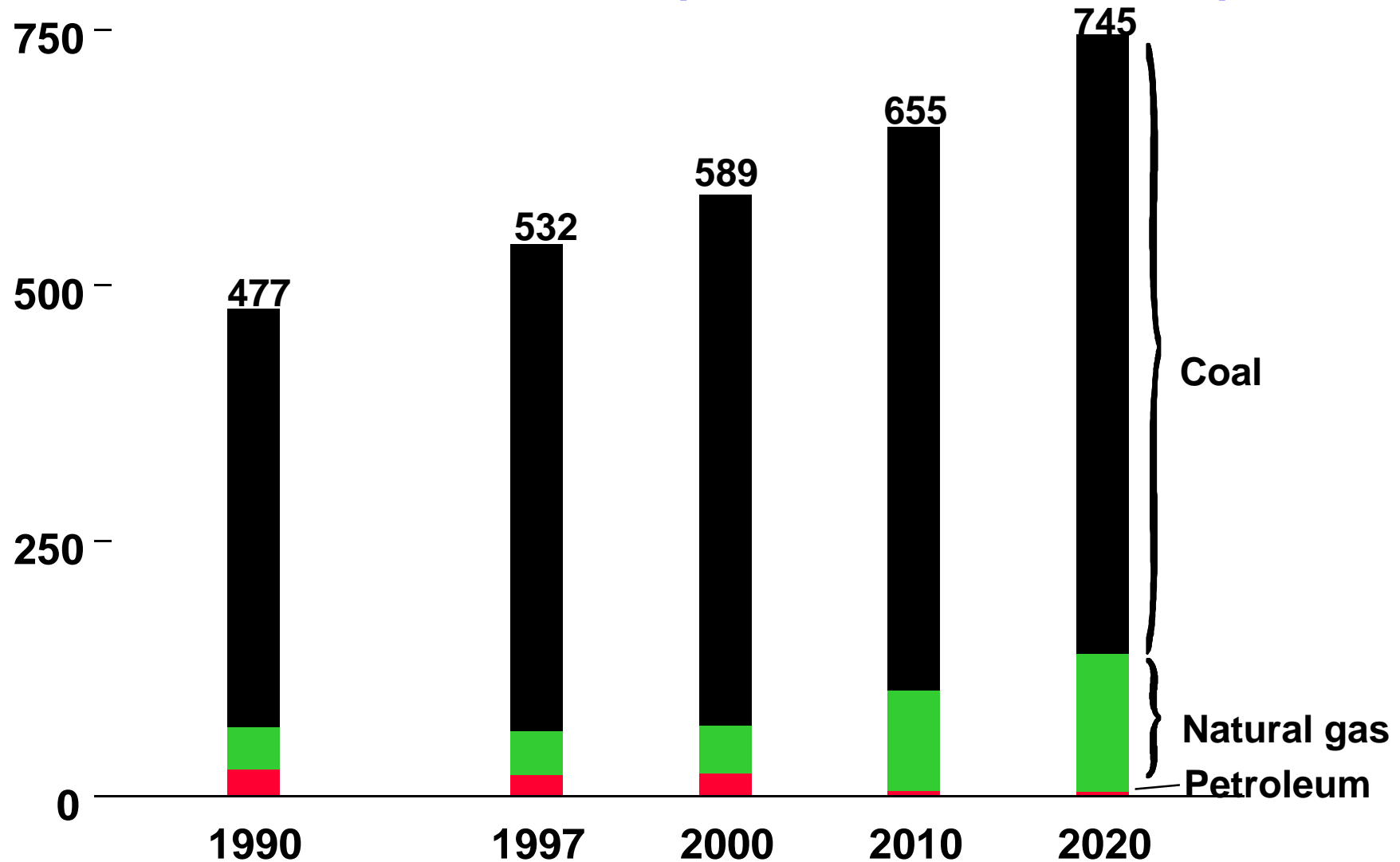
Average Minemouth Coal Prices in Three Cases, 1997-2020 (1997 dollars per ton)



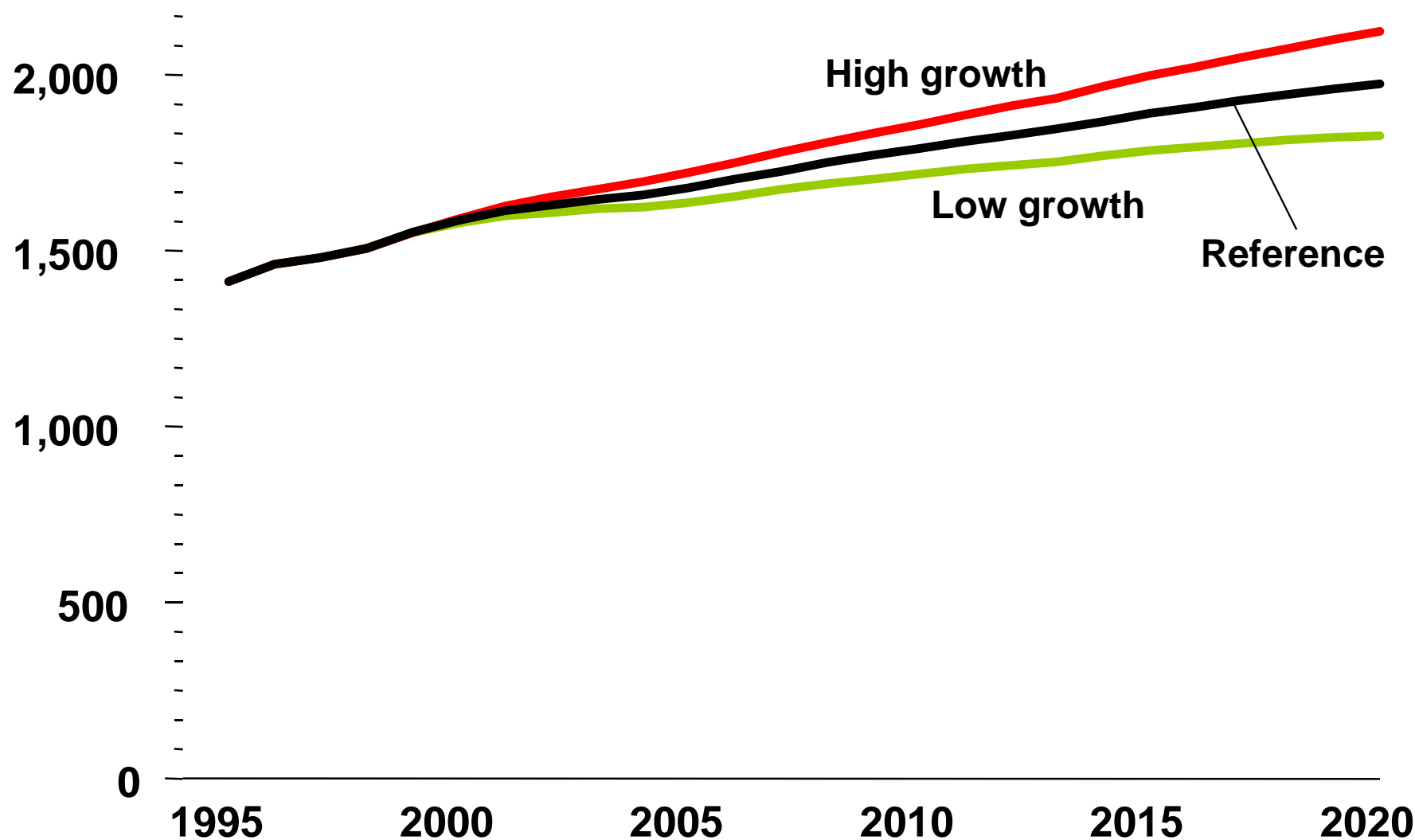
Carbon Emissions by Fuel, 1990-2020 (million metric tons)



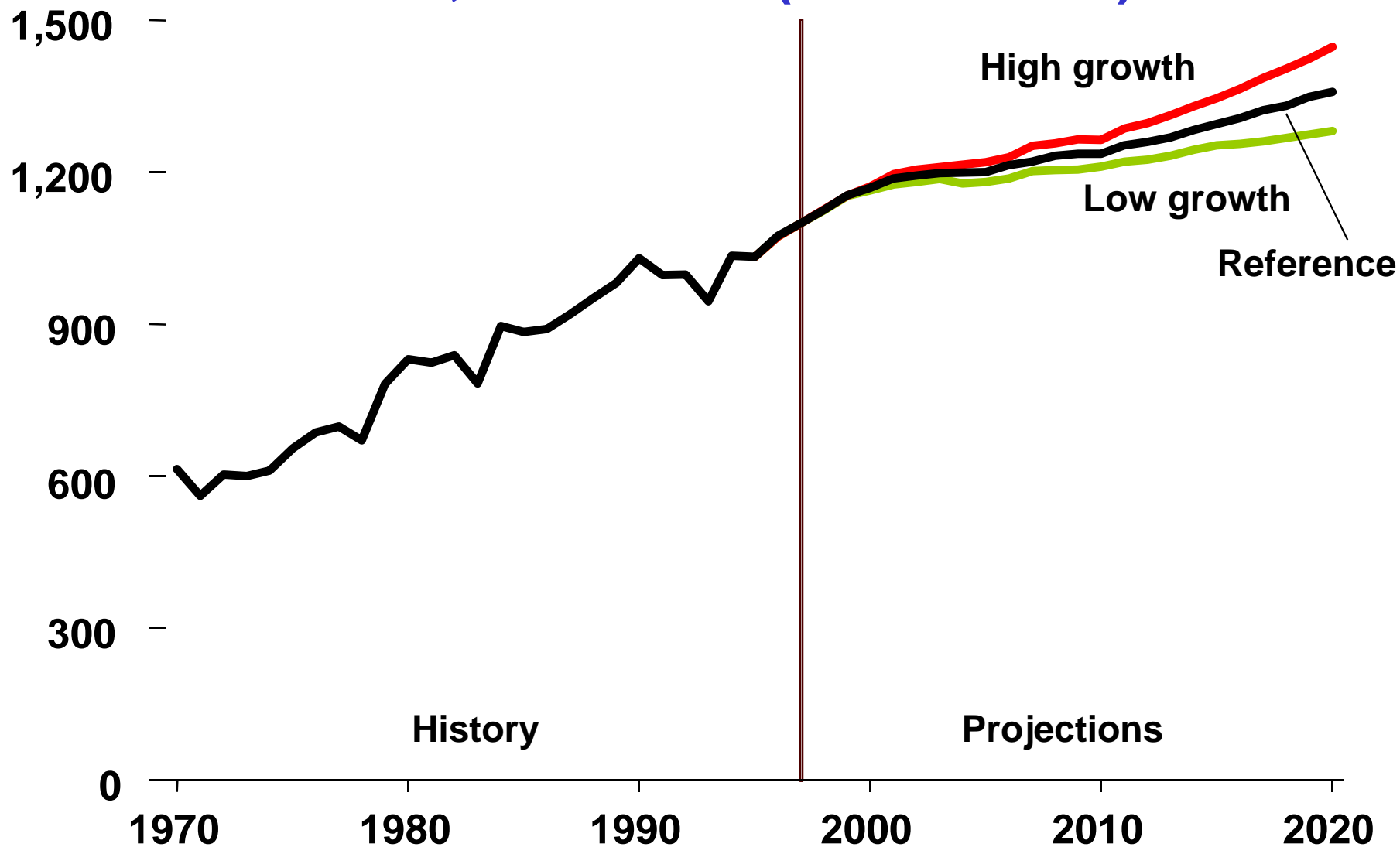
Carbon Emissions from Electricity Generation by Fuel, 1990-2020 (million metric tons)



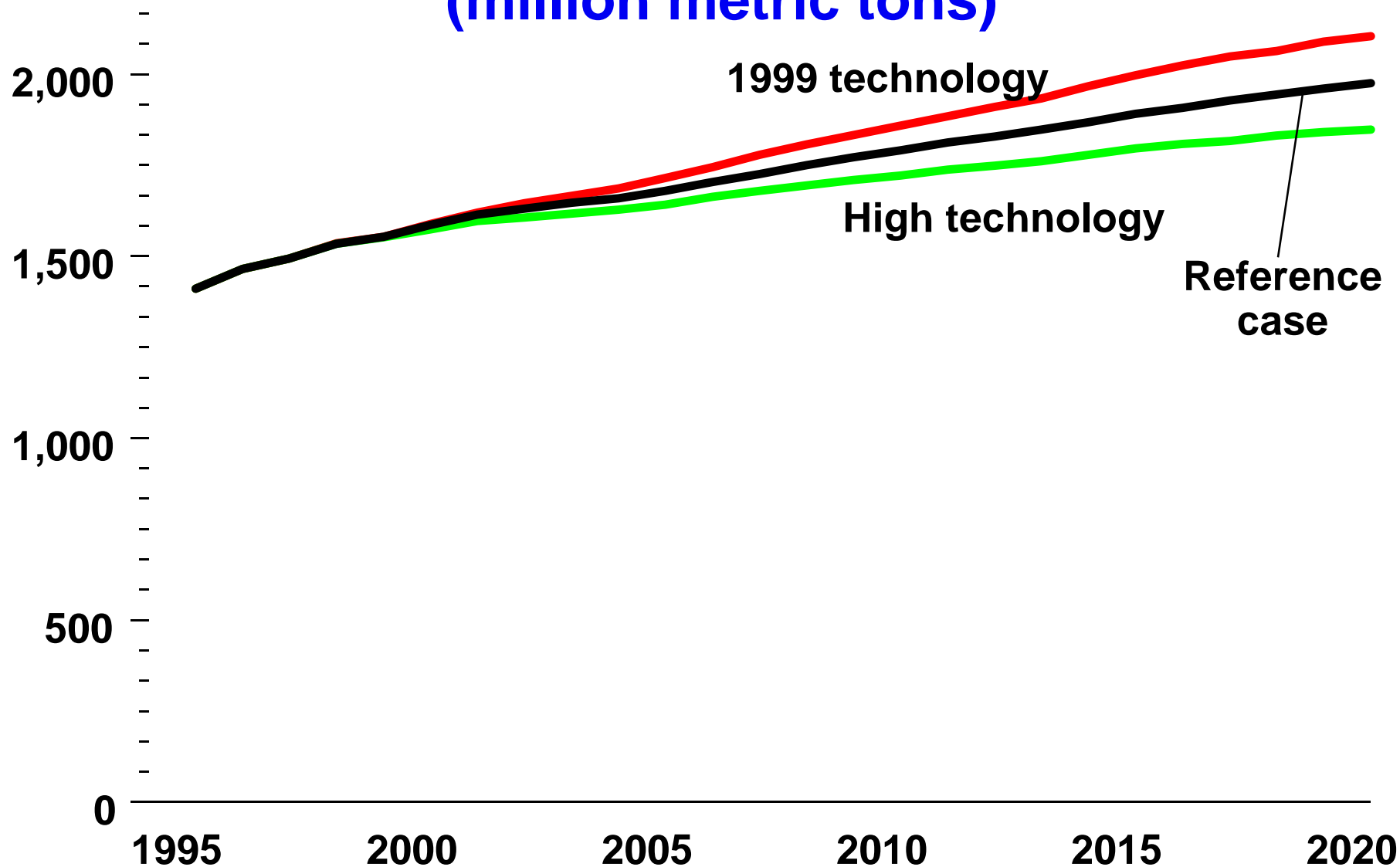
Carbon Emissions in Three Macroeconomic Growth Cases, 1990-2020 (million metric tons)



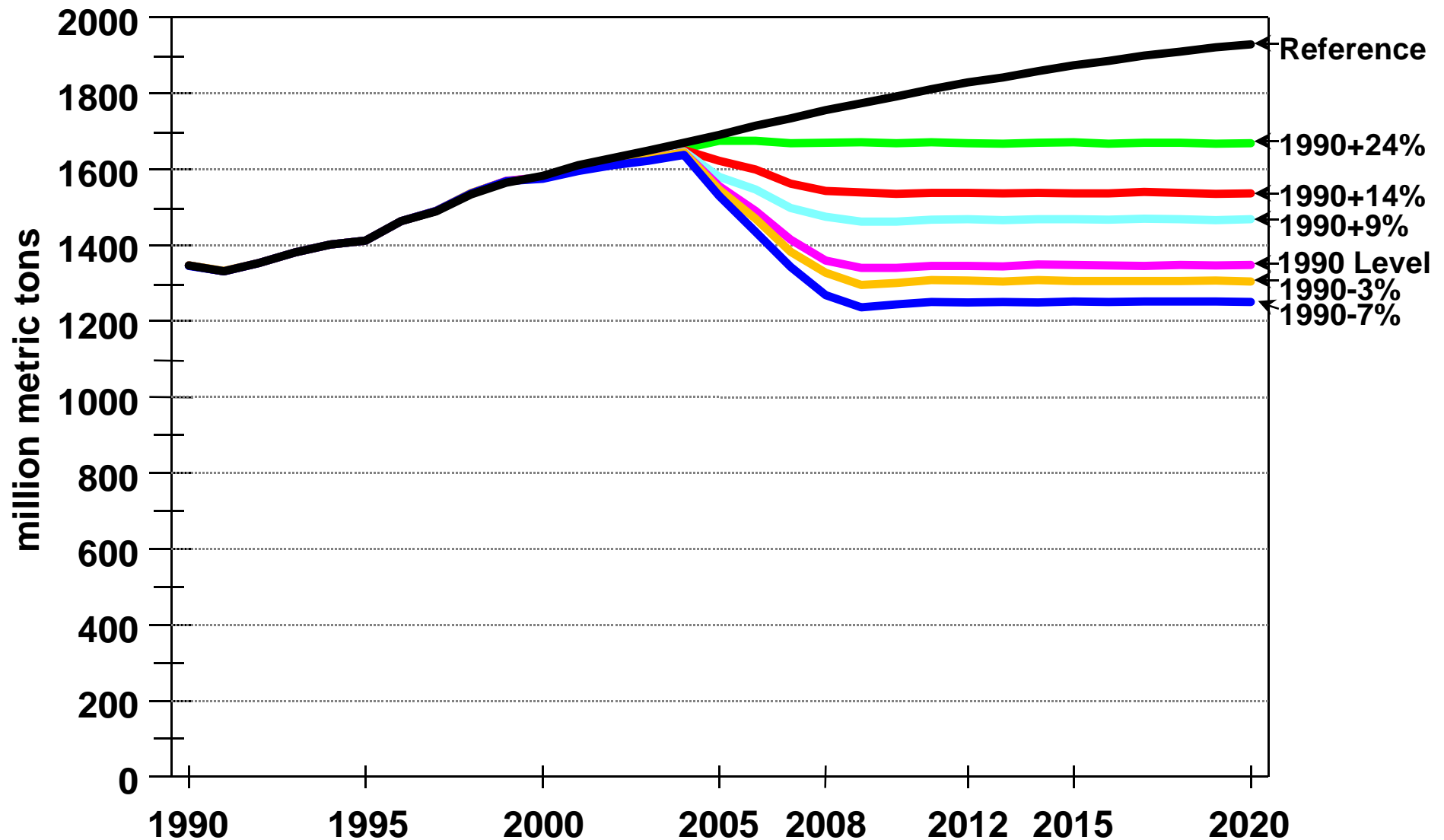
Coal Production in Three Macroeconomic Growth Cases, 1970-2020 (million tons)



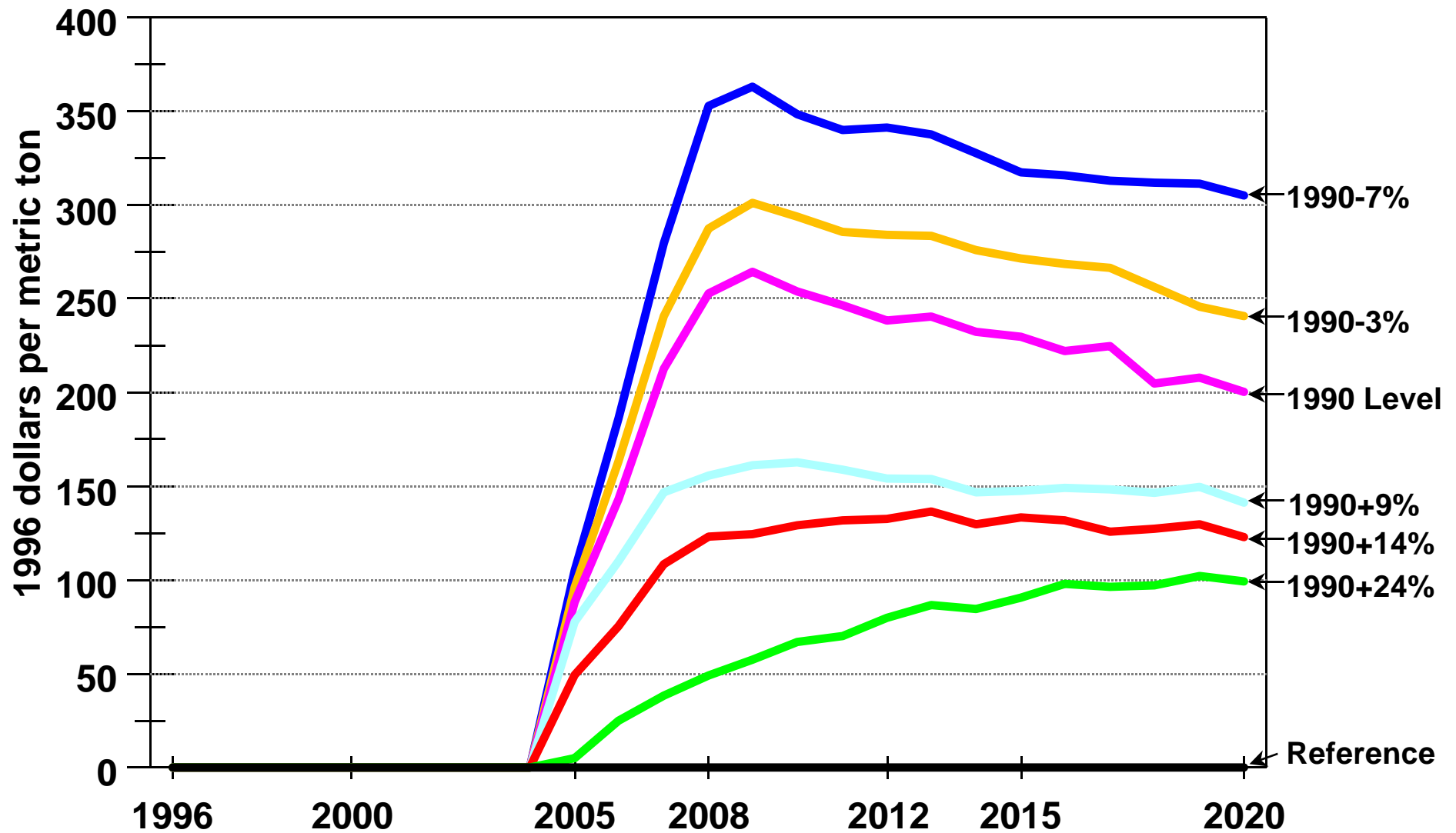
U.S. Carbon Emissions in Three Cases, 1995-2020 (million metric tons)



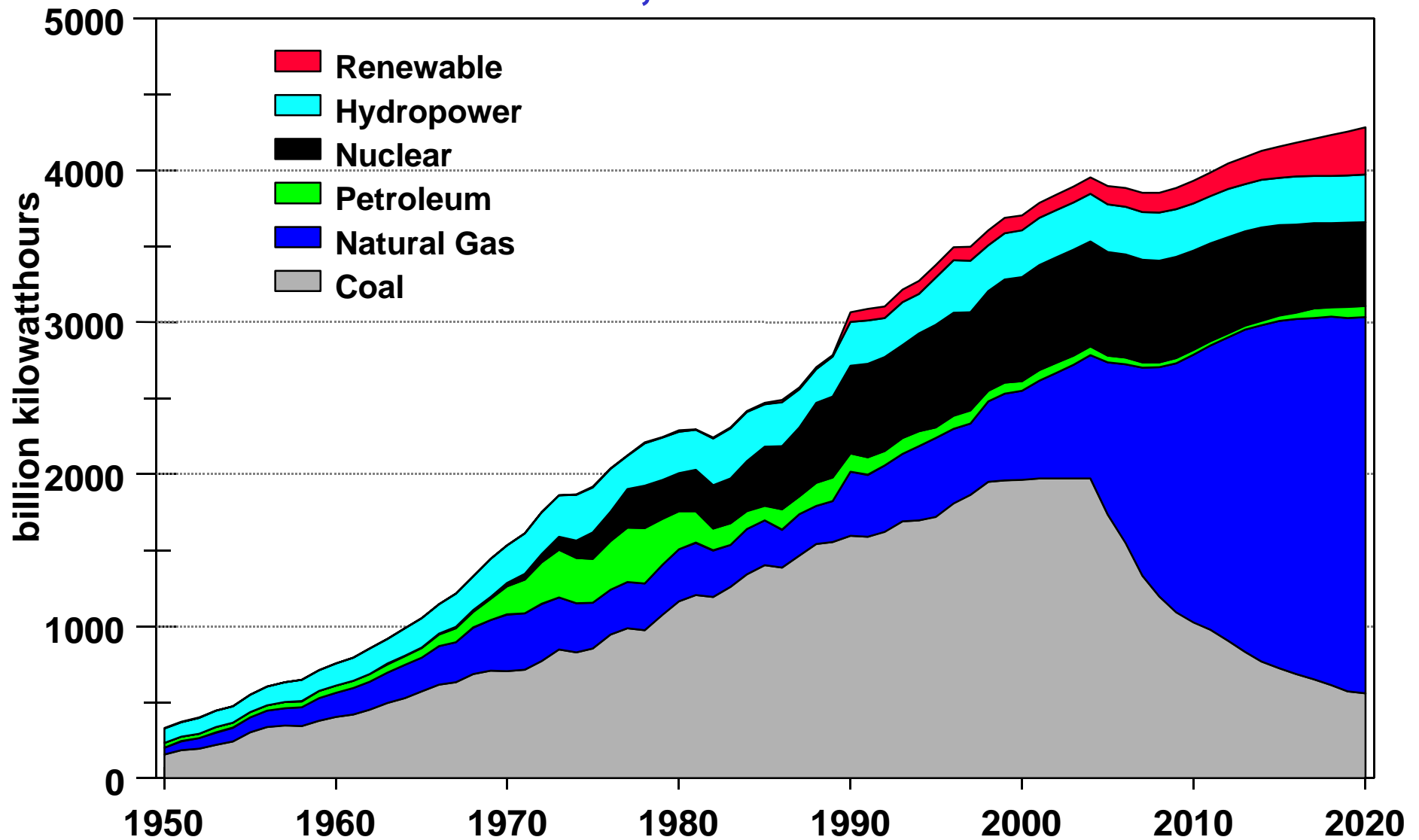
Carbon Emissions in the Reference and Six Target Cases, 1990-2020



Carbon Prices in the Six Target Cases, 1996-2020



Electricity Generation by Fuel in the 9%-above-1990 Case, 1950-2020



U.S. Coal Production, 1970-2020 (million tons)

